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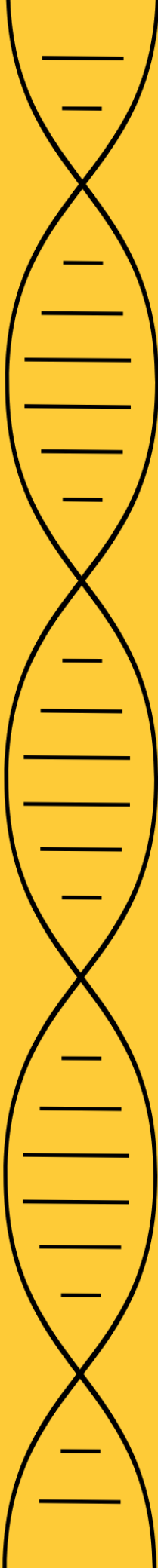
MANUAL for a CO-CREATION PROGRAMME

Industry version:

Exploring market acceptance and positioning of specific innovations



A co-creation programme for meaningful stakeholder involvement

To give directions to the development, regulation and implementation of new technologies

Innovations like new technologies can be disruptive and have a whole range of consequences, negative (risks) as well as positive (benefits), or neutral changes. They can change the world in ways that are sometimes hard to predict, but especially negative consequences must be anticipated and mitigated as much as possible.

The development, implementation and regulation of new technologies, including a broad assessment of the consequences, thus needs an inclusive process that involves all relevant stakeholders – ranging from those responsible for regulation, production and implementation as well as those expected to make use of the results and those speaking for the effects on the environment or social structures.

This inclusive approach has taken the form of a co-creation programme, and can enable policy makers, researchers and industries to make legislative and application-oriented choices that are relevant, feasible and acceptable for the majority of those involved.

Its main objectives are to pinpoint the hurdles and cues for acceptance and uptake, and find solutions with regulatory interventions, communication strategies, targeted financing of research, practical developments and guidelines, conditions for implementation, etc.

CO-CREATION PROGRAMME IN FOUR PHASES

1. Explore

- ✖ Map consequences and alternatives
- ✖ Map stakeholders
- ✖ Evaluate consequences per stakeholder

2. Involve

- ✖ Prioritise stakeholders for involvement
- ✖ Involvement strategy
- ✖ Roll-out

3. Assess

- ✖ Identify hurdles, cues & potential
- ✖ Validate
- ✖ Prioritise

4. Co-design

- ✖ Find solutions, improvements & mitigation strategies
- ✖ Validate

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Toolbox added to the manual

The manual describes the different steps in more detail and indicates what results to expect in each step. It also highlights the key points for each step, as well as tips and tricks for each step. Accompanied by the manual you can also find a toolbox, which contains more practical tools and step-by-step walkthroughs of certain parts of the programme.

The toolbox contains:

1. Explore

2. Involve

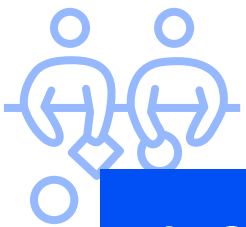
Consequences mapping tool

Stakeholder mapping tool

Co-creation toolbox

Communication & recruitment toolbox

3. Assess



4. Co-design

Co-design toolbox

Exploring market acceptance and positioning of specific innovations

The programme can be used to dig deeper into specific innovations under development, to finetune aspects like market acceptance, communication narratives and market positioning.

The industry itself will play a key role in exploring the acceptance and positioning of their own developments. They need to test whether their innovation corresponds to a certain need, whether it fills that need in an appropriate and realistic way, whether the value proposition is credible and whether those who can enable or block uptake have been meaningfully considered. It can thus steer implementation choices as well as market positioning and communication approaches.

Additionally, public communication channels, whether independent, industry-driven, policy-driven, or academic, can use this template to explore user perspectives and decide on communication narratives. For example, the programme could be applied to find the right approach for the communication of biotechnological alternatives for animal products, supporting the protein transition and a more sustainable future.

Expected outcomes

- ✖ A refined view of the barriers for acceptance and enabling conditions relevant to the innovation
- ✖ A clearer understanding of how different actors frame the product or process
- ✖ Inputs for product-market fit, positioning, or go-to-market strategy
- ✖ Practical recommendations for evidence building, communication, partnerships, or piloting

Main pitfalls and attention points

- ✖ Objectivity: Challenging your innovation under development can be confrontational, and remaining objective in this context can be very difficult, especially when significant resources have been dedicated to the research and development already.
- ✖ Openness: Tied to objectivity, is the ability to remain open for feedback. The goal of the engagement, especially in the *Involve* phase, is to listen, not convince.
- ✖ Perception: Skeptic users realise you will not be objective about your own invention, and it may affect how they react.
- ✖ Sharing information about your innovation, as well as results from findings, may be difficult in a competitive environment.

How to overcome?

- ✖ Involve a neutral third party that can openly and objectively capture and convey the message.
- ✖ Sharing confidential details about your innovation is usually not necessary: Affected stakeholders focus on the general idea, not the technical details.
- ✖ Often problem exploration can be tackled on a more general level, together with competitors.

Before starting

Before launching the trajectory of programme, the organising team should confirm five things:

Case
What research, innovation or implementation challenge is being discussed?

Room for influence
What can still change as a result of the trajectory, and what is already fixed?

Ownership
Who is responsible for organising the trajectory, synthesising the results, and converting them into action?

Central question
What must the trajectory help decide, improve, validate, or redesign?

Decision context
Who will use the results afterwards and for which decision or next step?

Without these elements, stakeholder engagement risks producing interesting conversations but not usable results.

The concrete output of this start-up step is a short case brief, an agreed trajectory objective, and a named owner for follow-up.

Note about time and budget requirements

- ✖ Not every case needs a full-scale programme.
- ✖ The different steps in the programme can be executed on several scales. The extent of each step (for example the number of interactions) can be determined by the available budget and time.
- ✖ For smaller or earlier-stage questions, a lighter route can still be useful if it remains disciplined.

Warning

This step is important to reassure that the purpose of the engagement is to listen and act upon the findings. Real engagement requires openness towards change in the initial plan.

Keep in mind the principles for meaningful stakeholder engagement, as defined by OECD or ECNL.

1. Explore

1.1 Mapping consequences & alternatives

What to map:

✖ Consequences OF the innovation

- POSITIVE Consequences (benefits)
- NEGATIVE Consequences (risks)
- NEUTRAL Consequences (changes)

Why mapping consequences?

- The potential benefits, as well as the potential risks of an innovation are an important driver of acceptance and success.
- The potential consequences also provide information on the key assets, as well as main elements for communication.

✖ Different dimensions

- Effects on safety for health, environment and sustainability
- Socio-economic effects
- Direct and indirect effects
- Short-term and long-term effects

How to map?

Consequences mapping tool

Compare

- IMPLEMENTATION of the innovation
- NO IMPLEMENTATION of the innovation (original)
- ALTERNATIVE SOLUTION(S)

Attention point

Safeguard objectivity in this process by involving a neutral external party (with sufficient scientific background and access to the relevant literature) in this process or for review.

Tip

Regulatory approvals require a mapping of risks and benefits, and so does the impact part of a double materiality analysis for CSRD (Corporate Sustainability Reporting Directive). These can serve as a basis (or a full analysis) for your consequence mapping.

Result

✖ The different types of effects of implementation; positive, negative and neutral effects

✖ The current and alternative ways to solve the same problem

1. Explore

1.2 Mapping stakeholders and their influence

Initial mapping from the quintuple helix (5H)

Who to consider:

Start from the quintuple helix, and consider for each category:

- ✖ Stakeholders targeted (users, audience)
- ✖ Stakeholders unintentionally affected
- ✖ Stakeholders that can 'make or break' the innovation

Mapping and evaluating INFLUENCE of the stakeholders

Aspects of influence to discuss:

POSITIVE Influence (push)	NEGATIVE influence (set back)	Influence on each other

Evaluate:

Degree of influence (1-5)

How to map & evaluate?

Stakeholder mapping tool

Tips & tricks

- ✖ Most stakeholder mappings also focus on interest of the group. In this context, interest is not a crucial dimension but is part of the 'influence' dimension. Consider this 'interest' aspect when evaluating the degree of influence.
- ✖ Include external parties (preferably linked to the different categories in the 5H) in this exercise to get multiple perspectives, and a more complete view on who your stakeholders are.

Result

- ✖ An overview of the stakeholders involved, targeted and unintentionally affected
- ✖ The level and type of influence they have on your innovation

1. Explore

1.3 Evaluation of consequences per stakeholder

Analysis and matching with the consequences mapping

Stakeholder list ← **Consequences list**

Evaluating the AFFECT of the stakeholders

POSITIVELY Affected (benefits)	**NEGATIVELY Affected (risks)**
Degree of benefit (1-5)	**Degree of risk** (1-5)

How to map & evaluate?

Stakeholder mapping tool

Attention point

The consequences mapping does not attribute weights to each individual risk or benefit. Since the objective of this exercise is not making a risk-benefit assessment, but pinpointing the most crucial stakeholders for engagement, a rough estimate is sufficient. This estimate can be based on the amount of different risks for the stakeholder, and an estimate of the importance of these risks.

Tips & tricks

- ✖ Use the template from the stakeholder mapping tool to collect all the information per stakeholder.
- ✖ Not every stakeholder needs the whole process, some stakeholders can be eliminated early on when relation to the innovation is neutral and of little influence.

Result

- ✖ Information on the (expected) effect of implementation of your innovation on different stakeholders

2. Involve

2.1 Prioritise stakeholders for engagement

Who to engage?

Prioritisation based on:

- **Degree of risk** (1-5)
- **Degree of benefit** (1-5)
- **Degree of influence** (1-5)

Enabling prioritisation:

Prioritise:
1. **High risk**
2. **High influence**

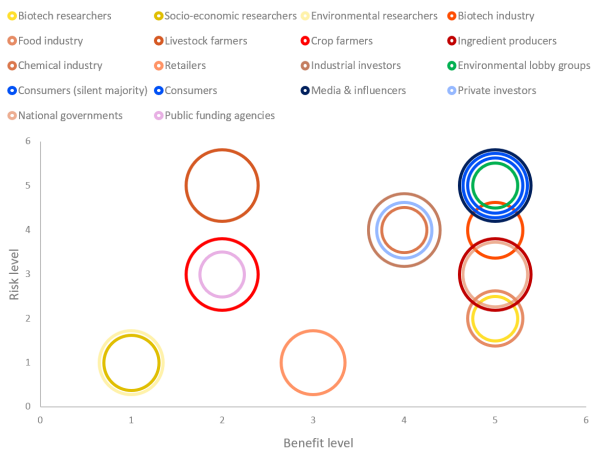
How to prioritise?

Stakeholder mapping tool

With calculation

Stakeholder	Benefits	Risks	Influence	R+I	B+R+I
Environmental researchers	1	1	4	5	6
Biotech industry	5	4	3	7	12
Food industry	5	2	3	5	10
Livestock farmers	2	5	5	10	12
Crop farmers	2	3	5	8	10
Ingredient producers	5	3	5	8	13
Chemical industry	4	4	2	6	10
Retailers	3	1	4	5	8
Industrial investors	4	4	5	9	13
Environmental lobby groups	5	5	2	7	12
Consumers	5	5	4	9	14
Media & influencers	5	5	5	10	15
Private investors	4	4	3	7	11
EU government	5	3	5	8	13
Public funding agencies	2	3	2	5	7

Visually



Attention point

The stakeholders identified as most crucial for engagement are often not part of your 'usual' network and may be hard to reach and engage.

Tip

Include external expertise or channels to reach the intended stakeholders.

Result

- ✖ An overview of how stakeholders are affected and how important they are for the success of the innovation
- ✖ A priority list of stakeholders most relevant for engagement

2. Involve

2.2 Set up involvement strategy

How to engage?

In this phase, stakeholders are best engaged separately, as each group may require a different approach and communication strategy.

Mode of interaction

Mode of interaction is dependent on:

- ✖ The size and diversity of the stakeholder group
- ✖ Personal opinion versus professional stance
- ✖ Time and budget available
- ✖ Competition dynamics between members of the stakeholder group

Mode of interaction	Best used when	Attention points
Small group sessions: • **Co-creation sessions** • **Focus groups** • **Discussion groups**	• Participants are free to state personal opinions. • A constructive dialogue and discussion are possible, i.e. there is no competition between participants, or their mutual challenges are bigger than competition effects. • The stakeholder is large and diverse, with many differences in backgrounds and opinions.	• Different and relevant profiles are present in a well-balanced group. • Ensure that everybody's voice is heard. • Create a comfortable and safe environment that ensures honest feedback. • The goal is to listen and capture different opinions, not convince.
One-on-one interactions (in-depth interviews)	• Participants speak from an official point of view, as representatives for an organisation. • Certain personalities are hard to engage in constructive dialogue with (they do not respect others' opinion). • Competition and confidentiality issues between participants may hinder openness.	• These stakeholders have potentially high impact on the perception of consumers/society. • The goal is to listen, not discuss. • Pay attention to framing and expectation management.
Online input: • **Quantitative surveys** • **Open calls**	• The stakeholder group is large and diverse and has many differences in backgrounds and opinions. • There is limited budget for physical interactions.	• Target group (input providers) may not be sufficiently large, representative or diverse. • Use non-steering formulation of questions (surveys).

2. Involve

2.2 Set up involvement strategy

How to engage the right persons?

Profiling & recruitment

How you approach your recruitment (targeted versus untargeted) has a great influence on the profiles that participate in interactions.

	Pros	Cons
Open call (untargeted)	• Unlimited input • Non-discriminating	• Large self-selection bias • Missing out on hard-to-reach voices
Closed invitations (targeted)	• Representation of population • Also targets hard to reach voices	• Not everyone is invited • Might be difficult to engage targeted groups

Profiles to consider within stakeholder groups, proportional to the composition of the group:

- ✖ Age, gender and cultural diversity
- ✖ Various educational backgrounds (scientific & technological literacy)
- ✖ Openness towards new innovations and technologies

How to communicate & recruit?

Communication & recruitment toolbox

Attention points

- ✖ Objectivity needs to be safeguarded.
- ✖ In this phase it is not advised to mix stakeholder groups.
- ✖ Outline the power the stakeholders have in the engagement process in order to manage expectations correctly.

Tip

- ✖ Involve external party with:
  - Access to the stakeholder groups
  - A neutral position
  - A critical eye

Result

- ✖ A strategy for involving each stakeholder group:
  - Who should be involved
  - How should they be involved

2. Involve

2.3 Roll-out involvement process

Setting up the central questions

1. What is your general perception of the technology (innovation) and the specific case?
2. What is the potential (direct and indirect) impact of the technology (innovation), both in general and on you specifically? Positive (benefits) / Negative (risks) / Neutral (changes)
3. What are alternative ways to solve the same problem, and how do the risks and benefits compare?
4. Are the proposed mitigation measures adequate? Are there conditions to become more acceptable?
5. What types of communication would work for you? What type of messages, wordings or narratives and through which channels?

Setting up the sessions

Ideal group size:
8-15 participants

The setup decides the reliability of answers:

- ✖ Indirect questioning and exercises
- ✖ Contextualisation: make concepts as 'tangible' as possible with examples, demonstration materials, real-world applications, …
- ✖ Stepwise approach

Your communication approach during the session influences input:

- ✖ Use layman's terms to make sure everyone understands what is being discussed.
- ✖ Focus on 'why?'.
- ✖ Be as neutral as possible: the goal is to listen, not to convince.

Setting up flow and exercises?

Co-creation toolbox

Timeline

A streamlined process for a co-creation session should take about 6-8 weeks. Participants need to be invited 4-8 weeks prior to the session.

Attention points

- ✖ Those easiest to engage are not necessarily the most relevant.
- ✖ Avoid common biases and factors interfering with openness, such as peer pressure or politeness answers, judgement or intimidation through your set-up.

Tips & tricks

- ✖ A relaxed atmosphere supports honest input.
- ✖ Serve food and drinks for a welcoming environment.

Result

- ✖ Outcomes of the interactions with each stakeholder group

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3. Assess

3.1 Identify hurdles, cues & potential

Analysis: qualitative versus quantitative	
Qualitative	Coding and clustering List recurrent themes and ideas No quantification
Quantitative	Statistical analysis Clustering of open answers Correct for representativeness of the population

Hurdles

- ✖ Risk factors, negative consequences or unwanted side effects, including indirect & socio-economic effects
- ✖ Acceptance issues
- ✖ Bottlenecks, loopholes & counterproductive elements
- ✖ Negative perceptions and associations (in wordings and narratives)

Cues

Elements that could overcome the hurdles:

- ✖ Trade-offs
- ✖ Requirements for viability and conditions for acceptance
- ✖ Concrete needs linked to specific application areas
- ✖ Solutions and mitigation strategies for hurdles
- ✖ Positive perceptions and associations (in wordings and narratives)

Potential

- ✖ Opportunities and benefits for different application areas

Attention points

- ✖ The group is optimized to represent maximum diversity, but is not representative for your population.
- ✖ Do not attempt to quantify the data, even though it is tempting to do so. Clear (quantitative) tendencies should be interpreted as an indication that needs to be validated quantitatively, not as facts.
- ✖ Analysis of qualitative data is prone to bias: Be vigilant of your own opinions and biases, and do not to let them interfere with the analysis.
- ✖ Consider the implications and limitations of your set-up (see also in co-creation toolbox).

Tips & tricks

- ✖ Let at least two people analyse the data, and use AI as external validation.
- ✖ AI can support clustering and identification of recurring themes, but should never be the sole analysis tool.
- ✖ There is more data than what is being said, written or drawn:
  - Things not being said
  - The way things were said
  - Facial expressions, physical behaviour and body language

Result

- ✖ A list of hurdles that could hinder the uptake and success of your innovation, and cues that could form the basis of implementation and communication strategies to overcome them
- ✖ Potential alternative applications or positionings for your innovation

3. Assess

3.2 Validate hurdles & Prioritise

Validation is essential to verify the data from the assess phase, which is based on qualitative data and cannot be quantified

Validate with:

- New surveys: They can validate the qualitative findings and allow for quantification (how many people have a certain perception or opinion?).
- Results from similar research: Previous findings can either validate or contradict current findings. If contradictions occur, pinpoint the differences that may cause these contradictions.

Prioritise:

- Focus on aspects you have an impact on / control over.
- What should move to the co-design phase?
- What can be tackled now, and which elements need further investigation or evidence?

Attention points

- A literature search can provide information on similar research, but can be outdated or give different results due to cultural differences or slight nuances in the case.
- The target group needs to be relevant and representative.
- Keep in mind there are significant biases in surveys.

Tips & tricks

- There are plenty of market research companies with access to large pools of consumers with a diversity of profiles, who can also provide support in the set-up of surveys.
- For validation with other stakeholders than consumers, such as farmers and industry, collaborate with clusters and representative organisations to collect sufficient data.
- Open-ended questions give better information on spontaneous thoughts and priorities than closed questions, and are now easy to process with AI.

Result

- Validated and quantified results
- Most important hurdles and cues (with the most potential impact)

4. Co-design

4.1 Setting up a co-design plan

Identification of relevant actors:

- ✖ Relevant stakeholders can be identified using the initial stakeholder mapping from the Explore phase:
  - Actors responsible for implementation
  - Actors responsible for regulation
  - End users
- ✖ Additional relevant stakeholders, such as:
  - Experts (relevant for the topic and who can help with the lifting/solving of the hurdles)
  - 'Unusual suspects' giving new perspectives (such as historians or experts in human behaviour)

Setting up an engagement and communication strategy:

- ✖ Outlining the best mode of interaction with the stakeholders:
  - Mixed group sessions
  - Single stakeholder group sessions
  - One-on-one Interviews
- ✖ Strategy on how to approach and engage the pinpointed stakeholder groups:
  - Appropriate channels for recruitment
  - What's in it for them

How to communicate & recruit?

Communication & recruitment toolbox

Setting up co-design sessions?

Co-design toolbox

Attention point

Sharing findings with other stakeholders is crucial in this phase, but may be difficult in a competitive environment.

Tips & tricks

- ✖ Ensure a clear incentive to attend, for example by providing information they require or linking the session to another event.
- ✖ Involve external party with access to the stakeholder groups.

Result

- ✖ Ways to overcome the hurdles for acceptance & to avoid negative perceptions and associations via strategic decisions for implementation and communication

4. Co-design

4.2 Find solutions, improvements & mitigation strategies

Basic approach to finding solutions

- ✖ Use a methodology that triggers thinking beyond the obvious.
- ✖ Share data and information that was gathered and analysed during the Assess phase.

	Pros	Cons
Online	• International participation	• Open discussions may be difficult • Interactions are less spontaneous
Offline	• More in-depth interactions	• Requires significant time engagement from participants • Restricted geological spread of participants

Setting up co-design sessions?

Co-design toolbox

Hurdles | **Cues** | **Potential**

CO-DESIGN PROCESS

Solutions | **Potential**

Suggested by affected stakeholders in the *Explore* phase

Solutions, improvements & mitigation strategies
From all stakeholder groups

Attention point

Participants may find it hard to think 'outside the box' of their current profession and (regulatory and cultural) context. You can use tools from co-creation, such as scenario thinking, to overcome this.

Tip

Predefine different solution categories, as it will help people think beyond the usual solutions.

Result

- ✖ Ways to overcome the hurdles for acceptance & to avoid negative perceptions and associations via strategic decisions for implementation and communication

4. Co-design

4.3 Validate and test

Solutions can be validated in different ways, depending on the case, the resources and budget and time available.

Communication narratives for example, can be validated in a survey, or tested out in the real world in a small geographical region. Adaptations to the innovation itself, or mitigation measures implemented through adaptations in the process or the monitoring scheme, can be checked by re-engaging with your initial stakeholders.

General guideline for validation:

Theoretical validation of findings and solutions	Surveys
Check whether the found solutions have the desired result	Laboratory experiments Small scale try-outs IRL
Check whether the found solutions answer the needs	Re-engage with initial (affected) stakeholders

Tip

Support your proposed solutions with mock-ups and prototypes, which is relevant for all types of validations, even surveys.

Result

✖ Validated solution for the most crucial hurdles for uptake and acceptance of your innovation

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